Pertussis: Guidelines for Treatment, Management and Reporting

Pertussis Case Definition: A cough illness lasting at least 2 weeks with one of the following: paroxysms of coughing, inspiratory "whoop" or post-tussive vomiting, or no other apparent cause.

Infectious Period: People are infectious from the beginning of the catarrhal period and up to 21 days after onset of cough or 5 days after starting antibiotics. **Incubation Period:** 7-10 days (range 4-21 days)

Diagnostic Tests/Specimens
Isolation by bacterial (nasopharyngeal) culture is the preferred laboratory test. PCR testing is now available at the state laboratory. **Serologic testing for pertussis is not standardized and should not be used for diagnosis.** Use 2 calcium alginate nasopharyngeal swabs (one for each nostril) to perform nasopharyngeal cultures. To help concentrate low levels of bacteria, place both swabs in 1 tube of Regan Lowe semi solid transport media.

Pertussis Culture Kits can be obtained from the state laboratory for provider use and returned to the laboratory for analysis. The state laboratory performs this service at no cost to the patient. **To order Pertussis Culture Kits, call Toby Bennett or Cindy Vanner at (401) 222-5586**. Pertussis Culture Kits can also be picked up from hospital laboratories: Women & Infants (401) 274-1122 ext. 1191; Kent County (401) 737-7010 ext. 1383; Landmark (401) 769-4100; Westerly (401) 596-6000; Newport (401) 845-1260; South County (401) 788-1437.

Treatment and Management of Index Cases
The following macrolides are recommended for treatment or prophylaxis of pertussis (http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5414a1.htm#tab4)

Azithromycin
- Infants aged <6 months: 10 mg/kg per day for 5 days.
- Infants and children aged ≥6 months: 10 mg/kg (maximum: 500 mg) on day 1, followed by 5 mg/kg per day (maximum: 250 mg) on days 2--5.
- Adults: 500 mg on day 1, followed by 250 mg per day on days 2--5.

Erythromycin Estolate
- Infants aged <1 month: not preferred because of risk for infantile hypertrophic pyloric stenosis (IHPS). Azithromycin is the recommended antimicrobial agent. If azithromycin is unavailable and erythromycin is used, the dose is 40--50 mg/kg per day in 4 divided doses. These infants should be monitored for IHPS.
- Infants aged ≥1 month and older children: 40--50 mg/kg per day (maximum: 2 g per day) in 4 divided doses for 14 days.
- Adults: 2 g per day in 4 divided doses for 14 days

Clarithromycin
- Infants aged <1 month: not recommended.
- Infants and children aged ≥1 month: 15 mg/kg per day (maximum: 1 g per day) in 2 divided doses each day for 7 days.
- Adults: 1 g per day in two divided doses for 7 days.

Trimethoprim-sulfamethoxazole can be used as an alternate antimicrobial agent:
- Infants aged <2 months: contraindicated.
- Infants aged ≥2 months and children: Trimethoprim 8 mg/kg per day, sulfamethoxazole 40 mg/kg per day in 2 divided doses for 14 days.
- Adults: Trimethoprim 320 mg per day, sulfamethoxazole 1,600 mg per day in 2 divided doses for 14 days.

Isolate patients at home and exclude them from school or work for the 5 days after antibiotics are started. If hospitalized, enforce standard and droplet precautions for the first 5 days of antibiotic treatment.

High Risk Groups
Persons who have pertussis, are suspected to have pertussis, or are contacts of a pertussis case-patient, and who may be at risk for developing severe disease and adverse outcomes include: infants <1 year of age; persons with an immunodeficiency condition; and persons who have other underlying severe disease such as chronic lung disease.

Management of Contacts
Identify exposed close contacts (household/childcare, other) of index cases and place on prophylactic antibiotic (regimen is identical to treatment) regardless of age or vaccination status. Definition of close contact will vary depending on the situation:
- Direct face-to-face contact for a period (not defined) with a case-patient who is symptomatic (e.g., in the catarrhal or paroxysmal period of illness);
- Shared confined space in close proximity for a prolonged period of time, such as >1 hour, with a symptomatic case-patient; or
- Direct contact with respiratory, oral, or nasal secretions from a symptomatic case-patient.
- Immunize with DTaP any unimmunized or under-immunized contacts < age 7.

Notify contacts with exposure in institutional or congregate settings with older children and adults, so that cough illness developing in the 21 days after exposure can be managed swiftly. The Rhode Island Department of Health can assist with coordination of such efforts.

Reporting to the Rhode Island Department of Health: Please report pertussis immediately upon diagnosis or strong clinical suspicion by phone to the Rhode Island Department of Health. Laboratory confirmation is not necessary prior to reporting suspected cases. Daytime from 8:30am-4: 30pm, call the Immunization Program at (401) 222-2312. After hours and on weekends, cases should be reported to the physician on call at (401) 272-5952. See also http://www.health.state.ri.us/topics/pertussis.php.